

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	5	((COC) or (gamma near2 carboxylated near2 osteocalcin) or Gla-OC) same (osteoporosis or fracture or fragility)	US-PGPUB; USPAT; EPO; DERWENT	OR	ON	2005/01/05 10:35
L2	228	((COC) or (gamma near2 carboxylated near2 osteocalcin) or Gla-OC) and EDTA	US-PGPUB; USPAT; EPO; DERWENT	OR	ON	2005/01/05 10:36
L3	10	((COC) or (gamma near2 carboxylated near2 osteocalcin) or Gla-OC) same EDTA	US-PGPUB; USPAT; EPO; DERWENT	OR	ON	2005/01/05 10:45
L4	228	((COC) or (gamma near2 carboxylated near2 osteocalcin) or Gla-OC) and EDTA	US-PGPUB; USPAT; EPO; DERWENT	OR	ON	2005/01/05 10:45
L5	75	I4 and (EDTA same sample)	US-PGPUB; USPAT; EPO; DERWENT	OR	ON	2005/01/05 10:46
L6	22	I4 and (EDTA same antibody)	US-PGPUB; USPAT; EPO; DERWENT	OR	ON	2005/01/05 10:47

that are available. If you have requested multiple files, you can specify a corrected file name or you can enter "IGNORE" to continue accessing the remaining file names entered.

ENTER A FILE NAME OR (IGNORE):ignore

COST IN U.S. DOLLARS

	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.21	0.21

FILE 'AGRICOLA' ENTERED AT 10:37:30 ON 05 JAN 2005

FILE 'BIOTECHNO' ENTERED AT 10:37:30 ON 05 JAN 2005

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=> ((COC) or (gamma near2 carboxylated near2 osteocalcin) or Gla-OC) and (osteoporosis or fracture or fragility)

L1	0 FILE AGRICOLA
L2	1 FILE BIOTECHNO
L3	0 FILE CONFSCI
L4	0 FILE HEALSAFE
L5	0 FILE IMSDRUGCONF
L6	2 FILE LIFESCI
L7	0 FILE MEDICONF
L8	2 FILE PASCAL

TOTAL FOR ALL FILES

L9	5 ((COC) OR (GAMMA NEAR2 CARBOXYLATED NEAR2 OSTEOCALCIN) OR GLA-OC ) AND (OSTEOPOROSIS OR FRACTURE OR FRAGILITY)
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=> dup rem

ENTER L# LIST OR (END):19

DUPLICATE IS NOT AVAILABLE IN 'IMSDRUGCONF, MEDICONF'.

ANSWERS FROM THESE FILES WILL BE CONSIDERED UNIQUE

PROCESSING COMPLETED FOR L9

L10 3 DUP REM L9 (2 DUPLICATES REMOVED)

=> d l10 ibib abs total

L10 ANSWER 1 OF 3 LIFESCI COPYRIGHT 2005 CSA on STN DUPLICATE 1

ACCESSION NUMBER: 2001:41145 LIFESCI

TITLE: Strong Prediction of **Fractures** Among Older Adults by the Ratio of Carboxylated to Total Serum Osteocalcin

AUTHOR: Luukinen, H.; Kaekonen, S.-M.; Pettersson, K.; Koski, K.;  
Laippala, P.; Levgren, T.; Kivela, S.-L.; Vaeaenaenen,  
H.K.  
CORPORATE SOURCE: Department of Public Health Science and General Practice,  
University of Oulu, Oulu University Hospital, Oulu, Finland  
SOURCE: Journal of Bone and Mineral Research [J. Bone Miner. Res.],  
(20001200) vol. 15, no. 12, pp. 2473-2478.  
ISSN: 0884-0431.  
DOCUMENT TYPE: Journal  
FILE SEGMENT: T  
LANGUAGE: English  
SUMMARY LANGUAGE: English

AB We examined serum total osteocalcin (TOC), carboxylated osteocalcin (COC), and their ratio (COC/TOC) by one-step two-site immunofluorescent assays in 87% (n = 792) of all home-dwelling persons of 70 years or older living in a defined area in northern Finland. Other baseline subject-related risk factors of **fractures** were assessed by postal questionnaires, interviews, clinical examinations, and tests. During a 5-year follow-up period, all falls and **fractures** (n = 106) were recorded by regular phone calls and by examining all the medical records yearly. Serum TOC and COC concentrations increased with advancing age and were higher in women than in men, but corresponding differences were not found in the case of COC/TOC. The adjusted relative risk of **fracture** was elevated in association with low (less than or equal to -1 SD from the mean) COC; hazard ratio (HR, 95% CI) 2.00 (1.20-3.36) and low COC/TOC; HR 5.32 (3.26-8.68), the relative risk being highest in the population older than 80 years; and HR 7.02 (2.42-20.39). The predictive value of low COC/TOC lasted 3 years. The multivariable-adjusted relative risk of hip **fracture** (n = 26) in regard to low COC/TOC ratio was 3.49 (1.12-10.86), as compared with the persons who did not suffer hip **fractures**. Our results suggest that serum COC concentrations and, more strongly, COC/TOC, predict the occurrence of **fractures** in older community-dwelling adults. The risk of **fracture** associated with low COC/TOC equals the hip **fracture** risk previously verified for concomitant high serum undercarboxylated OC concentrations and low bone mineral density.

L10 ANSWER 2 OF 3 LIFESCI COPYRIGHT 2005 CSA on STN  
ACCESSION NUMBER: 93:19276 LIFESCI  
TITLE: Effects of cocaine and norepinephrine on primary cultures  
of neonatal rat myocardial cells.  
AUTHOR: Welder, A.A.; Eselin, J.A.; Melchert, R.B.; Davis, S.K.;  
O'Dell, J.F.  
CORPORATE SOURCE: Coll. Pharm., Univ. Oklahoma Health Sci. Cent., Div. Med.  
Chem. and Pharmacodyn., 1110 N. Stonewall, Oklahoma City,  
OK 73190, USA  
SOURCE: J. TOXICOL. ENVIRON. HEALTH., (1992) vol. 36, no. 2, pp.  
75-90.  
DOCUMENT TYPE: Journal  
FILE SEGMENT: X  
LANGUAGE: English  
SUMMARY LANGUAGE: English

AB The purpose of this investigation was to evaluate the synergistic or additive toxic effects of norepinephrine (NE) and Coc in primary myocardial cell cultures obtained from 3- to 5-d-old Sprague-Dawley rats. Alterations in lactate dehydrogenase release (LDH), lysosomal neutral red retention (NR), beating activity, and morphology were evaluated after treatment of the cells for 1-24 h with 1 x 10<sup>sup(-3)</sup> M Coc alone, 1 x 10<sup>sup(-5)</sup> M Coc alone, 1 x 10<sup>sup(-5)</sup> M NE alone, 1 x 10<sup>sup(-3)</sup> M Coc with 1 x 10<sup>sup(-5)</sup> M NE, or 1 x 10<sup>sup(-5)</sup> M Coc with 1 x 10<sup>sup(-5)</sup> M NE. LDH release was elevated significantly after 24 h only with those cells exposed to 1 x 10<sup>sup(-3)</sup> M Coc alone and 1 x 10<sup>sup(-3)</sup> M Coc + 1 x

10 super(-5) M NE. Using NR retention as a score for lysosomal treatment of the cells with 1 x 10 super(-5) M Coc and 1 x 10 super(-3) M Coc alone did not decrease dye retention significantly. However, 1 x 10 super(-5) M NE combined with 1 x 10 super(-3) M Coc significantly reduced lysosomal dye retention was early as 1 h after treatment. After 24 h, 1 x 10 super(-5) M NE alone and 1 x 10 super(-5) M NE combined with 1 x 10 super(-5) M Coc significantly increased lysosomal **fragility**. Beating activity was altered in all treatment groups.

L10 ANSWER 3 OF 3 BIOTECHNO COPYRIGHT 2005 Elsevier Science B.V. on STN DUPLICATE

ACCESSION NUMBER: 1991:21190175 BIOTECHNO  
 TITLE: A one step sandwich enzyme immunoassay for  $\gamma$ -carboxylated osteocalcin using monoclonal antibodies  
 AUTHOR: Koyama N.; Ohara K.; Yokota H.; Kurome T.; Katayama M.; Hino F.; Kato I.; Akai T.  
 CORPORATE SOURCE: Biotechnology Research laboratory, Takara Shuzo Co. Ltd., Otsu, Shiga 520-21, Japan.  
 SOURCE: Journal of Immunological Methods, (1991), 139/1 (17-23)  
 CODEN: JIMMBG ISSN: 0022-1759  
 DOCUMENT TYPE: Journal; Article  
 COUNTRY: Netherlands  
 LANGUAGE: English  
 SUMMARY LANGUAGE: English

AN 1991:21190175- BIOTECHNO

AB A highly sensitive, simple and reliable one-step sandwich enzyme immunoassay (EIA) for the  $\gamma$ -carboxylated form of osteocalcin (Gla-OC) has been developed using a monoclonal antibody. The minimum amount of Gla-OC detected by this EIA was approximately 0.2 ng/ml when a 10  $\mu$ l aliquot of the sample was used. The serum Gla-OC level in 30 healthy subjects was  $3.6 \pm 2.19$  ng/ml (mean  $\pm$  SD). A significant increase was seen in patients with chronic renal failure ( $20.3 \pm 4.60$  ng/ml), atherosclerosis ( $8.3 \pm 4.94$  ng/ml) and **osteoporosis** ( $10.1 \pm 4.60$  ng/ml). The correlation between the values obtained by the sandwich-EIA and competitive RIA methods was given by the linear regression equation,  $y = 2.896 + 0.759x$ , for which the correlation coefficient (r) was 0.815 (n = 58). This newly developed Gla-OC specific EIA may be useful for the diagnosis of metabolic bone disease and ectopic calcification.

=> file .chemistry  
 COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
13.42	13.63

FULL ESTIMATED COST

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=> ((COC) or (gamma near2 carboxylated near2 osteocalcin) or Gla-OC) and  
(osteoporosis or fracture or fragility)

L11 12 FILE CAPLUS  
L12 1 FILE BIOTECHNO  
L13 3 FILE COMPENDEX  
L14 0 FILE ANABSTR  
L15 0 FILE CERAB  
L16 0 FILE METADEX  
L17 187 FILE USPATFULL

TOTAL FOR ALL FILES

L18 203 ((COC) OR (GAMMA NEAR2 CARBOXYLATED NEAR2 OSTEOCALCIN) OR GLA-OC  
) AND (OSTEOPOROSIS OR FRACTURE OR FRAGILITY)

=> dup rem

ENTER L# LIST OR (END):l11-l16

L14 HAS NO ANSWERS

L15 HAS NO ANSWERS

L16 HAS NO ANSWERS

PROCESSING COMPLETED FOR L11

PROCESSING COMPLETED FOR L12

PROCESSING COMPLETED FOR L13

PROCESSING COMPLETED FOR L14

PROCESSING COMPLETED FOR L15

PROCESSING COMPLETED FOR L16

L19 15 DUP REM L11-L16 (1 DUPLICATE REMOVED)

=> dup rem

ENTER L# LIST OR (END):l11-16

L14 HAS NO ANSWERS

L15 HAS NO ANSWERS

L16 HAS NO ANSWERS

PROCESSING COMPLETED FOR L11

PROCESSING COMPLETED FOR L12

PROCESSING COMPLETED FOR L13

PROCESSING COMPLETED FOR L14

PROCESSING COMPLETED FOR L15

PROCESSING COMPLETED FOR L16

L20 15 DUP REM L11-16 (1 DUPLICATE REMOVED)

=> d l20 ibib abs total

L20 ANSWER 1 OF 15 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:351805 CAPLUS

DOCUMENT NUMBER: 140:361198

TITLE: Nanoparticulate cemented carbides showing high  
hardness, strength, and toughness for cutting tools

INVENTOR(S): Kobayashi, Masaki

PATENT ASSIGNEE(S): Toshiba Tungaloy Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 16 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004131769	A2	20040430	JP 2002-295790	20021009
PRIORITY APPLN. INFO.:			JP 2002-295790	20021009

AB The cemented carbides comprise WC-based hard phase of average grain size 0.05-0.5  $\mu$ m and Ni-based binder phase containing W 5-30, Cr 5-15, Si 2-10, and B 1-5%. The hard phase may consist of (a) WC-based major phase, (b) dispersed phase of CrC, CoC, WC, NiC, and/or their solid solns. and (c) cubic phase of Group IVB-VIB carbides and/or nitrides, in volume ratio of a/b/c (50-95):(0-5):(0-5).

L20 ANSWER 2 OF 15 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2003:637921 CAPLUS

DOCUMENT NUMBER: 139:261736

TITLE: Non-linear long-term tensile creep of poly(propylene)/cycloolefin copolymer blends with fibrous structure

AUTHOR(S): Kolarik, Jan; Pegoretti, Alessandro; Fambri, Luca; Penati, Amabile

CORPORATE SOURCE: Institute of Macromolecular Chemistry, Academy of Sciences of the Czech Republic, Prague, 162 06/6, Czech Rep.

SOURCE: Macromolecular Materials and Engineering (2003), 288(8), 629-641

CODEN: MMENFA; ISSN: 1438-7492

PUBLISHER: Wiley-VCH Verlag GmbH & Co. KGaA

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The tensile deformation of materials with Poisson's ratio smaller than 0.5 generates an addnl. free volume, which means that tensile creep under constant stress and temperature is a non-iso-free volume process. Fractional free volume

rising proportionally to the creep strain accounts for a continuous shortening of retardation times. To account for this effect, internal time was introduced which is related to a hypothetical pseudo iso-free-volume state. The shift factor along the time scale in the time-strain superposition is not constant for an isothermal creep curve, but rises monotonically from point to point with the elapsed creep time. The reconstructed compliance dependencies obtained for various stresses approx. obey the time-strain superposition thus forming a generalized creep curve. A routinely used empirical equation was found suitable to describe the effects of time and stress on compliance of parent polymers and their blends. The previously proposed predictive format for the time-dependent compliance of polymer blends was found applicable also to poly(propylene) (PP)/cycloolefin copolymer (COC) blends with fibrous morphol. As COC shows a tendency to form fibers in a PP matrix, the mixing rule customarily used for fiber composites was found more appropriate for injection molded specimens than the equivalent box model for isotropic blends. The predicted compliance curve for a pseudo iso-free-volume state can be transformed into a real curve for a selected stress  $\sigma$  (in the interval up to the yield stress).

REFERENCE COUNT: 72 THERE ARE 72 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 3 OF 15 COMPENDEX COPYRIGHT 2005 EEI on STN

ACCESSION NUMBER: 2004(36):4642 COMPENDEX

TITLE: Life cycle modeling of wellbore cement systems used for enhanced geothermal system development.

AUTHOR: McCulloch, Jess; Gastineau, John; Bour, Daniel L.; Ravi, Kris

MEETING TITLE: International Collaboration for Geothermal Energy in

the Americas - Geothermal Resources Council: 2003  
Annual Meeting.

MEETING LOCATION: Morelia, Michoacan, Mexico

MEETING DATE: 12 Oct 2003-15 Oct 2003

SOURCE: Transactions - Geothermal Resources Council v 27  
2003.p 147-154  
CODEN: TGRCD7 ISSN: 0193-5933

PUBLICATION YEAR: 2003

MEETING NUMBER: 63432

DOCUMENT TYPE: Conference Article

TREATMENT CODE: Theoretical

LANGUAGE: English

AN 2004(36):4642 COMPENDEX

AB Coso Operating Company, LLC (COC), and the Energy and Geosciences Institute (EGI) at the University of Utah have been granted funding from the Department of Energy to develop an enhanced geothermal system (EGS) at Coso. Coso is an operating geothermal plant that provides an excellent opportunity to experiment with methods for enhancing the geothermal reservoir through hydraulic, thermal, and chemical stimulation. Any additional energy produced at this plant can be used immediately. However, stresses to casing and cement during reservoir enhancement could result in the movement of steam around the outside of the casing string if the cement fails, causing lost steam production and possible safety hazards. COC and Halliburton, a partner in the study team for the EGS project, are using Halliburton's advanced WellLife[trademark] analysis software to predict stresses on casing and cement in a wellbore subjected to the temperature and pressure changes planned for the project. A number of cementing options were modeled, including foamed cement and cements resistant to attack by wet CO<sub>2</sub>. Near-wellbore stresses and rock physical properties collected during early phases of the Coso EGS project provided input to the model. Data collected by Brookhaven National Laboratory and Halliburton on the physical properties of cements were also used in the model. The modeling included pressure changes during fracture breakdown testing and thermal cycling in the production well, as well as hydraulic stimulation and thermal stimulation in the injection well. Results indicate that tensional stresses are most likely to cause failure. Foamed cements, which are both resilient and nonshrinking, fared the best under both temperature-induced and pressure-induced stresses. Conventional nonshrinking cements also showed a reduced risk of failure. 6 Refs.

L20 ANSWER 4 OF 15 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2002:849628 CAPLUS

DOCUMENT NUMBER: 137:353008

TITLE: Preparation of  $\beta$ -carbolinecarboxylates as inhibitors of phosphodiesterase 5 for treatment of cardiovascular disorders.

INVENTOR(S): Sawyer, Jason Scott; Orme, Mark W.; Copp, James D.

PATENT ASSIGNEE(S): Lilly Icos LLC, USA

SOURCE: PCT Int. Appl., 179 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

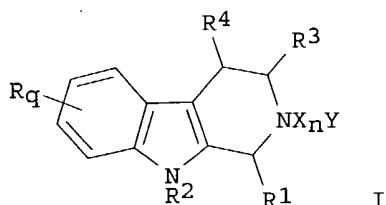
LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002088123	A1	20021107	WO 2002-US10367	20020402
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ,			

UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU,  
TJ, TM  
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH,  
CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR,  
BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG  
CA 2441792 AA 20021107 CA 2002-2441792 20020402  
EP 1383765 A1 20040128 EP 2002-766739 20020402  
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
IE, SI, LT, LV, FI, RO, MK, CY, AL, TR  
JP 2004532852 T2 20041028 JP 2002-585422 20020402  
US 2004147542 A1 20040729 US 2004-471476 20040209  
PRIORITY APPLN. INFO.: US 2001-286730P P 20010425  
WO 2002-US10367 W 20020402  
OTHER SOURCE(S): MARPAT 137:353008  
GI



AB Title compds. [I; R = halo, alkyl, aryl, heteroaryl, cycloalkyl, heterocycloalkyl, CORa, O2CRA, CO2Ra, NO2, CF3, OCF3, cyano, SO2Ra, SORa, SRA, OSO2CF3, CONRaRb, etc.; R1 = (substituted) aryl, heteroaryl, cycloalkyl, heterocycloalkyl, bicycyl, etc.; Ra = H, alkyl, cycloalkyl, aryl, aralkyl, alkylenearyl, heteroaryl, heteroarylalkyl, etc.; Rb = H, alkyl, cycloalkyl, aryl, aralkyl, heteroaryl, etc.; Rc = H, alkyl, aryl, heteroaryl, aralkyl, heteroarylalkyl, etc.; RaRc = atoms to form a 5-6 membered ring; R2 = H, alkyl, cycloalkyl, heterocycloalkyl, alkenyl, aralkyl, CORa, CSNRaRb, etc.; R3 = CORb, CO2Rb, CONRaRb, CONRaSO2Rb, etc.; R4 = H, alkyl, aryl, heteroaryl, aralkyl, cycloalkyl, heterocycloalkyl, etc.; X = CO, (CH2)tCO, COC.tplbond.C, CS, SO, SO2, CONRa, etc.; Y = Ra, (CH2)nCORc, NRb(CH2)nRc, O(CH2)nRc, etc.; n = 0, 1; q = 0-4; t = 1-4], were prepared Thus, (1R,3R)-1-benzo-1,3-dioxol-5-yl-2-(3-phenylacryloyl)-2,3,4,9-tetrahydro-1H- $\beta$ -carboline-3-carboxylic acid dimethylamide (preparation outlined) inhibited PDE5 with IC50 = 0.044  $\mu$ M.  
REFERENCE COUNT: 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 5 OF 15 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2002:703891 CAPLUS

DOCUMENT NUMBER: 138:231564

TITLE: Time-dependent effects of vitamin K2 (Menatetrenone) on bone metabolism in postmenopausal women

AUTHOR(S): Ozuru, Rieko; Sugimoto, Toshitsugu; Yamaguchi, Tohru; Chihara, Kazuo

CORPORATE SOURCE: Third Division, Department of Medicine, Kobe University School of Medicine, Kobe, 650-0017, Japan  
SOURCE: Endocrine Journal (Kyoto, Japan) (2002), 49(3), 363-370

CODEN: ENJOEO; ISSN: 0918-8959

PUBLISHER: Japan Endocrine Society

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Vitamin K is known to mediate carboxylation of glutamyl residues of osteocalcin. The authors evaluated the effects of vitamin K2 (Menatetrenone) treatment (45 mg/day) for 48 wk on the markers of bone



formation and resorption, bone mineral d. (BMD), and the incidence of vertebral **fractures** in 34 Japanese postmenopausal women (aged 48-82 yr). Serum levels of alkaline phosphatase (ALP) increased gradually and became significant at 48 wk after Menatetrenone treatment, while urinary excretion of deoxypyridinoline (DPD) decreased transiently but significantly at 4 wk. Serum levels of both intact osteocalcin (OC) and carboxylated OC (**Gla-OC**) increased rapidly and significantly within 4 wk and sustained their high values up to 48 wk after the treatment, while those of undercarboxylated OC (Glu-OC) decreased reciprocally. These results can be interpreted to suggest that Glu-OC was converted to **Gla-OC** in vivo. On the other hand, lumbar BMD values showed no significant change and only one subject with a previous vertebral **fracture** had one newly occurring vertebral **fracture**. These results indicate that Menatetrenone treatment of postmenopausal women constantly elevates bone formation markers as well as converts Glu-OC to **Gla-OC**. Thus, vitamin K2 treatment may promote bone formation, at least as measured biochem. in these subjects.

REFERENCE COUNT: 48 THERE ARE 48 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 6 OF 15 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2002:379301 CAPLUS

DOCUMENT NUMBER: 137:170213

TITLE: On predicting environmental stresscracking in polymers

AUTHOR(S): Hansen, Charles M.

CORPORATE SOURCE: FORCE Technology, Broendby, DK-2605, Den.

SOURCE: Polymer Degradation and Stability (2002), 77(1), 43-53  
CODEN: PDSTDW; ISSN: 0141-3910

PUBLISHER: Elsevier Science Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Environmental stress cracking (ESC) is shown to correlate well using a plot of the RED number (polymer-solvent interaction) found from Hansen solubility

parameters (HSP) vs. a mol. size parameter, the molar volume, V. These plots are presented for a cyclo-olefinic copolymer, a polycarbonate, and a polyvinylchloride. There are 3 distinct regions on this type of plot. There is a region at low RED including those challenge liqs. which dissolve the polymer or are very aggressive, and ESC is not found as such. There is a region at high RED where the absorption is not great enough to matter, or else the absorption rate is slow enough to allow relaxation of the polymer in preference to ESC. ESC can occur in an intermediate region where there is some absorption of challenge liquid. The ESC region on these plots increases in size with increased stress and/or increased critical strain. The mol. shape of the challenge mols. is clearly important in addition to V. ESC may occur for a challenge chemical with a linear mol. structure, but not for one with the same RED and V, but with a cyclic structure. The absorption rate of the cyclic mol. is too slow. All of the test liqs. causing ESC failure in an immersed, injection-molded, cyclo-olefinic copolymer (COC) cylinder had measurable surface resistances retarding absorption. Emphasis is therefore placed on surface resistance to absorption, since this may play an important part in the ESC phenomena itself, and can possibly lead to delaying a catastrophic ESC failure beyond normal testing times. This surface resistance is thought to originate from the rate at which adsorbing mols. can locate a hole in the polymer surface large enough to accommodate them. Larger and more sterically complicated mols. have much more difficulty finding such a suitable hole, so the surface transport coefficient is inversely proportional to the mol. cross-section. Once an adsorbed mol. locates in a suitable hole, the rate of motion into the bulk is dependent on the diffusion coefficient. Therefore the surface transport coefficient is directly proportional to

the diffusion coefficient

REFERENCE COUNT: 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 7 OF 15 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2000:707377 CAPLUS

DOCUMENT NUMBER: 133:234752

TITLE: Method for prediction of bone **fractures** by  
osteocalcin measurements

INVENTOR(S): Kakonen, Sanna-Maria; Luukinen, Heikki; Pettersson,  
Kim; Lovgren, Timo; Vaananen, H. Kalervo

PATENT ASSIGNEE(S): Finland

SOURCE: PCT Int. Appl., 34 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000058732	A1	20001005	WO 2000-FI227	20000320
W: JP, US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
EP 1166122	A1	20020102	EP 2000-914195	20000320
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				

PRIORITY APPLN. INFO.: FI 1999-693 A 19990329  
WO 2000-FI227 W 20000320

AB This invention concerns a method for the assessment of bone  
**fragility** and **fracture** risk, or **osteoporosis**,  
in a person. In said method, the concentration of gamma-carboxylated  
osteocalcin  
(COC) and optionally also the concentration of intact or total  
osteocalcin (IOC or TOC, resp.) in a body fluid sample of said person is  
measured. The concentration of gamma-carboxylated osteocalcin (COC) so  
obtained is compared to the mean concentration of gamma-carboxylated  
osteocalcin  
(mean COC) in similar body fluid samples of the population of  
the same age and sex. Alternatively, the determined ratio COC/IOC or  
COC/TOC for said person, is compared to the mean ratio COC  
/IOC or COC/TOC, (mean ratio COC/IOC or mean ratio  
COC/TOC) determined from measurements in similar body fluid samples of  
the population of the same age and sex. A measured COC that is  
lower than the mean COC is used as indication of  
**osteoporosis**, bone **fragility** or increased risk of bone  
**fracture** in said person. Preferably, a determined ratio COC  
/TOC that is lower than the mean ratio COC/TOC is used as  
indication of **osteoporosis**, bone **fragility** or  
increased risk of bone **fracture** in said person. The invention  
concerns further kits for use in the assessment according to this  
invention.

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 8 OF 15 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2000:880223 CAPLUS

DOCUMENT NUMBER: 134:126449

TITLE: Strong prediction of **fractures** among older  
adults by the ratio of carboxylated to total serum  
osteocalcin

AUTHOR(S): Luukinen, H.; Kakonen, S. -M.; Pettersson, K.; Koski,  
K.; Laippala, P.; Lovgren, T.; Kivela, S. -L.;

Vaananen, H. K.  
CORPORATE SOURCE: Department of Public Health Science and General  
Practice, University of Oulu, Oulu, Finland  
SOURCE: Journal of Bone and Mineral Research (2000), 15(12),  
2473-2478  
CODEN: JBMREJ; ISSN: 0884-0431  
PUBLISHER: American Society for Bone and Mineral Research  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
AB The authors examined serum total osteocalcin (TOC), carboxylated osteocalcin (COC), and their ratio (COC/TOC) by one-step two-site immunofluorescent assays in 87% (n = 792) of all home-dwelling persons of 70 yr or older living in a defined area in northern Finland. Other baseline subject-related risk factors of **fractures** were assessed by postal questionnaires, interviews, clin. exams., and tests. During a 5-yr follow-up period, all falls and **fractures** (n = 106) were recorded by regular phone calls and by examining all the medical records yearly. Serum TOC and COC concns. increased with advancing age and were higher in women than in men, but corresponding differences were not found in the case of COC/TOC. The adjusted relative risk of **fracture** was elevated in association with low ( $\leq -1$  SD from the mean) COC; hazard ratio (HR, 95% CI) 2.00 (1.20-3.36) and low COC/TOC; HR 5.32 (3.26-8.68), the relative risk being highest in the population older than 80 yr; and HR 7.02 (2.42-20.39). The predictive value of low COC/TOC lasted 3 yr. The multivariable-adjusted relative risk of hip **fracture** (n = 26) in regard to low COC/TOC ratio was 3.49 (1.12-10.86), as compared with the persons who did not suffer hip **fractures**. These results suggest that serum COC concns. and, more strongly, COC/TOC, predict the occurrence of **fractures** in older community-dwelling adults. The risk of **fracture** associated with low COC/TOC equals the hip **fracture** risk previously verified for concomitant high serum undercarboxylated OC concns. and low bone mineral d.

REFERENCE COUNT: 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 9 OF 15 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1997:349214 CAPLUS  
DOCUMENT NUMBER: 127:45003  
TITLE: Oral contraceptives and systemic lupus erythematosus  
AUTHOR(S): Petri, Michelle; Robinson, Courtland  
CORPORATE SOURCE: Johns Hopkins University School of Medicine,  
Baltimore, MD, 21205, USA  
SOURCE: Arthritis & Rheumatism (1997), 40(5), 797-803  
CODEN: ARHEAW; ISSN: 0004-3591  
PUBLISHER: Lippincott-Raven  
DOCUMENT TYPE: Journal; General Review  
LANGUAGE: English

AB A review, with 88 refs. The authors present evidence of a deleterious effect of combined oral contraceptives (COC) on the activity of systemic lupus erythematosus (SLE) or on thromboembolism (TE) in SLE. The potential beneficial effects of oral contraceptives, including better contraception, control of cyclic SLE disease activity, prevention of **osteoporosis**, and preservation of fertility during cyclophosphamide treatment is also discussed.

REFERENCE COUNT: 88 THERE ARE 88 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 10 OF 15 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1992:483286 CAPLUS  
DOCUMENT NUMBER: 117:83286  
TITLE: Effects of cocaine and norepinephrine on primary  
cultures of neonatal rat myocardial cells  
AUTHOR(S): Welder, Allison A.; Eselin, Julie A.; Melchert,

CORPORATE SOURCE: Russell B.; Davis, Sylvia K.; O'Dell, Jennifer F.  
SOURCE: Coll. Pharm., Univ. Oklahoma, Oklahoma, OK, USA  
Journal of Toxicology and Environmental Health (1992),  
36(2), 75-90  
CODEN: JTEHD6; ISSN: 0098-4108  
DOCUMENT TYPE: Journal  
LANGUAGE: English

AB Sudden cardiac death associated with cocaine (Coc) abuse in healthy, phys. active individuals became a grave concern in the late 1980s. It is well documented that phys. activity increases circulating plasma catecholamine levels. Catecholamines as well as Coc are independently capable of inducing toxic cardiac effects. The purpose of this investigation was to evaluate the synergistic or additive toxic effects of norepinephrine (NE) and Coc in primary myocardial cell cultures obtained from 3- to 5-d-old Sprague-Dawley rats. Alterations in lactate dehydrogenase release (LDH), lysosomal neutral red retention (NR), beating activity, and morphol. were evaluated after treatment of the cells for 1-24 h with 1 + 10<sup>-3</sup> M Coc alone, 1 + 10<sup>-5</sup> M Coc alone, 1 + 10<sup>-5</sup> M NE alone, 1 + 10<sup>-3</sup> M Coc with 1 + 10<sup>-5</sup> M NE, or 1 + 10<sup>-5</sup> M Coc with 1 + 10<sup>-5</sup> M NE. LDH release was elevated significantly after 24 h only with those cells exposed to 1 + 10<sup>-3</sup> M Coc alone and 1 + 10<sup>-3</sup> M Coc + 1 + 10<sup>-5</sup> M NE. Using NR retention as a score for lysosomal treatment of the cells with 1 + 10<sup>-5</sup> M Coc and 1 + 10<sup>-3</sup> M Coc alone did not decrease dye retention significantly. However, 1 + 10<sup>-5</sup> M NE combined with 1 + 10<sup>-3</sup> M Coc significantly reduced lysosomal dye retention as early as 1 h after treatment. After 24 h, 1 + 10<sup>-5</sup> M NE alone and 1 + 10<sup>-5</sup> M NE combined with 1 + 10<sup>-3</sup> M Coc significantly increased lysosomal fragility. Beating activity was altered in all treatment groups. Contractile activity was slow and irregular or completely absent with 1 + 10<sup>-5</sup> and 1 + 10<sup>-3</sup> M Coc, resp. When NE (1 + 10<sup>-5</sup> M) was combined with both concns. of Coc, there was distinct focalization of sharp, rapid contractions within the cells, which were asynchronous and/or arrhythmic in nature. Those cells exposed to 1 + 10<sup>-5</sup> M NE with 1 + 10<sup>-5</sup> M Coc for 24 h appeared hypercontracted with marked pseudopodia and cytoplasmic granule formation distinctly different from that exhibited by the cells exposed to 1 + 10<sup>-5</sup> M Coc alone. These data demonstrate that NE potentiates the adverse effects of Coc on contractile activity and morphol. of spontaneously contracting neonatal myocardial cells maintained in culture.

L20 ANSWER 11 OF 15 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 1

ACCESSION NUMBER: 1991:627613 CAPLUS

DOCUMENT NUMBER: 115:227613

TITLE: A one step sandwich enzyme immunoassay for  $\gamma$ -carboxylated osteocalcin using monoclonal antibodies

AUTHOR(S): Koyama, Nobuto; Ohara, Kanako; Yokota, Hiroko; Kurome, Tohru; Katayama, Masahiko; Hino, Fumitsugu; Kato, Ikunoshin; Akai, Toshihiro

CORPORATE SOURCE: Biotechnol. Res. Lab., Takara Shuzo Co., Ltd., Otsu, 520-21, Japan

SOURCE: Journal of Immunological Methods (1991), 139(1), 17-23  
CODEN: JIMMBG; ISSN: 0022-1759

DOCUMENT TYPE: Journal

LANGUAGE: English

AB A highly sensitive, simple and reliable one-step sandwich enzyme immunoassay (EIA) for the  $\gamma$ -carboxylated form of osteocalcin (Gal-OC) has been developed using a monoclonal antibody. The min. amount of Gla-OC detected by this EIA was approx. 0.2 ng/mL when a 10  $\mu$ L aliquot of the sample was used. The serum Gla-

OC level in 30 healthy subjects was  $3.6 \pm 2.19$  ng/mL (mean  $\pm$  SD). A significant increase was seen in patients with chronic renal failure ( $20.3 \pm 4.60$  ng/mL), atherosclerosis ( $8.3 \pm 4.94$  ng/mL) and **osteoporosis** ( $10.1 \pm 4.60$  ng/mL). The correlation between the values obtained by the sandwich EIA and competitive RIA methods was given by the linear regression equation,  $y = 2.869 + 0.759x$ , for which the correlation coefficient (r) was 0.815 (n = 58). This newly developed **Gla-OC** specific EIA may be useful for the diagnosis of metabolic bone disease and ectopic calcification.

L20 ANSWER 12 OF 15 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1990:211063 CAPLUS  
DOCUMENT NUMBER: 112:211063  
TITLE: Determination of serum Gla-form osteocalcin by enzyme immunoassay with monoclonal antibodies  
AUTHOR(S): Yokota, Hiroko; Koyama, Nobuto; Katayama, Masahiko; Hino, Fumitsugo; Kato, Ikunoshin; Akai, Toshihiro  
CORPORATE SOURCE: Biotech. Res. Lab., Takara Shuzo Co. Ltd., Otsu, 520-21, Japan  
SOURCE: Igaku no Ayumi (1990), 152(8), 525-6  
CODEN: IGAYAY; ISSN: 0039-2359  
DOCUMENT TYPE: Journal  
LANGUAGE: Japanese  
AB Four monoclonal antibodies, OCG4, OCG3, OCG2, and OC4.30 to bovine osteocalcin (OC) were generated. Sandwich enzyme immunoassay using 2 antibodies, OCG4 and OC4.30 was used for the determination of serum Gla-form osteocalcin (**Gla-OC**) in patients with **osteoporosis**, chronic renal failure, and atherosclerosis. The serum **Gla-OC** concentration in these patients was significantly higher compared with normal subjects. The **Gla-OC**-specific assay method may be useful for the diagnosis of metabolic bone disease and ectopic calcification.

L20 ANSWER 13 OF 15 COMPENDEX COPYRIGHT 2005 EEI on STN

ACCESSION NUMBER: 1990(4):37050 COMPENDEX  
DOCUMENT NUMBER: 900447855  
TITLE: Methodology of testing irradiated specimens for resistance to brittle **fracture**.  
AUTHOR: Vasin, A.M. (Ukraine Academy of Sciences, Kiev, USSR); Garachuk, O.K.; Karasev, V.S.; Mamchich, S.D.; Rivkin, E.Yu.; Rodin, M.E.  
SOURCE: Ind Lab (USSR) v 54 n 4 Nov 1988 p 517-520  
CODEN: INDLAP ISSN: 0019-8447  
PUBLICATION YEAR: 1988  
DOCUMENT TYPE: Journal  
TREATMENT CODE: Experimental  
LANGUAGE: English  
AN 1990(4):37050 COMPENDEX DN 900447855  
AB Investigation of the influence of irradiation on the critical opening of the crack (**COC**) is performed on flat rectangular specimens with an edge crack for three-point bending tests which are fabricated from rolled steel 12KhGNMF. The radiation stability of this steel was estimated by results of tensile and shock bending tests. The influence of a different specimen irradiation temperature on the value of the critical crack opening was estimated during the tests. Specimens that were irradiated at the maximal (280 degree C) and minimal (240 degree C) temperatures were tested at identical temperatures. The data obtained showed that the difference in irradiation temperature in the 240-280 degree C range does not influence the resistance to brittle **fracture** for the steel 12KhGNMF. 8 Refs.

L20 ANSWER 14 OF 15 COMPENDEX COPYRIGHT 2005 EEI on STN

ACCESSION NUMBER: 1982(1):5967 COMPENDEX  
DOCUMENT NUMBER: 82013200

TITLE: INVESTIGATIONS IN THE FIELD OF THE MECHANICS OF THE  
**FRACTURE** OF VISCOELASTIC BODIES.  
AUTHOR: Kaminskii, A.A.  
SOURCE: Sov Appl Mech v 16 n 9 Sep 1980 p 741-759  
CODEN: SOAMBT ISSN: 0038-5298  
PUBLICATION YEAR: 1980  
LANGUAGE: English

AN 1982(1):5967 COMPENDEX DN 82013200

AB An attempt is made to review the research work on the mechanics of the **fracture** of viscoelastic bodies, from the standpoint of the latest advances in this field of science. Particular sections deal with general questions, two-phase models, the main period, growth of a crack in anisotropic viscoelastic materials, experimental investigations, comparisons with theoretical principles. It is concluded that, at the present time, a reasonably complete study has been made only of problems of the subcritical growth of the macroscopic cracks of a normal **fracture** in isotropic homogeneous viscoelastic bodies, under the action of external loads, either constant or rising slowly with time. These problems have been investigated for different models of the **fracture** of viscoelastic bodies and different **fracture** criteria (COC, global energy criterion, local energy criterion, and others). Future lines of research are pointed out. 105 refs.

L20 ANSWER 15 OF 15 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1961:145390 CAPLUS

DOCUMENT NUMBER: 55:145390

ORIGINAL REFERENCE NO.: 55:27604f-i,27605a-c

TITLE: Structural requirements for lathrogenic agents

AUTHOR(S): Levene, C. I.

CORPORATE SOURCE: Univ. Oxford, UK

SOURCE: Journal of Experimental Medicine (1961), 114, 295-310

CODEN: JEMEAV; ISSN: 0022-1007

DOCUMENT TYPE: Journal

LANGUAGE: Unavailable

AB cf. CA 55, 14698e. A series of compds, was assayed for lathrogenic activity in the chick embryo by measuring the relative viscosity of tissue exts. and a **fragility** index (time required for severing the head from the body under a constant stretching load). Lathrogenic agents fell into 4 groups: nitriles, ureides, hydrazides, and hydrazines, in that decreasing order of effectiveness. The activity of the compds., expressed as relative viscosity of M NaCl exts. of 16-day-old embryos injected with 0.054 mmol 2 days earlier, was: aminoacetonitrile 45.2, methyleneaminoacetonitrile 44.9,  $\beta$ -aminopropionitrile 35.5, thiosemicarbazide 34.9, semicarbazide 22.1, acetone semicarbazone 25.1, isoniazid 15.5, nicotinic acid hydrazide 17.6, benzhydrazide 17.3, cyanoacetic acid hydrazide 14.8, and hydrazine hydrate 14.7. Substitution in aminoacetonitrile or  $\beta$ -aminopropionitrile of either the nitrile group or the terminal amine group resulted in loss of activity (glycine Me ester 2.0, glycine 1.7, methylamine 2.0, aminoacetaldehyde acetal 2.0, glycine amide 2.1,  $\beta$ -alanine 1.7, ethylenediamine 1.7, 2-mercaptoethylamine 1.7, cyanoacetic acid 1.9,  $\alpha$ -cyanoacetonitrile 2.3, benzyl cyanide 2.5, acetonitrile 2.1, propionitrile 1.9,  $\beta$ -hydroxypropionitrile 2.1,  $\beta,\beta'$ -iminodipropionitrile 2.5, succinonitrile 2.0,  $\beta$ -dimethylaminopropionitrile 1.9, butyronitrile 2.3). Modification of the NH<sub>2</sub>NH ending of semicarbazide destroyed all activity (1-phenylsemicarbazide 1.8, oxamide 2.2, acetamide 1.9, nicotinamide 1.8, 6-aminonicotinamide 2.2, acrylamide 1.9, urea 2.2, asparagine 1.8, glutamine 1.5). Modification of the NH<sub>2</sub> ending of semicarbazide produced some loss of activity, indicating that activity resides in the hydrazide grouping NH<sub>2</sub>NH+ **COC** (4,4-diphenylsemicarbazide 2.3,  $\gamma$ -L-glutamylhydrazide 10.9, glycine hydrazide 11.1, p-nitrobenzhydrazide 14.1). Substitution of hydrazine diminished activity (unsym-dimethylhydrazine 5.3, sym-dimethylhydrazine 4.7, hydrazobenzene 3.1, 2,4-dinitrophenylhydrazine 2.1). Pyridoxal

tended to inhibit the lathyrogenic activity of ureides and especially that of the hydrazides but not that of nitriles or of thiosemicarbazide. Skeletal deformities of embryos were induced by nitriles and by high doses of ureides and hydrazides, but pyridoxal did not prevent deformities induced by nitriles. Evidence was found that pyridoxal antagonizes some lathyrogens by forming Schiff bases with them; pyridoxine and pyridoxamine were not antagonistic. Evidence is also presented that lathyrogens do not act as inhibitors of monoamine oxidases or as chelate-forming agents, nor, in the case of isoniazid, as an antinicotinamide agent.